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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/251,183 02/17/99 LIN

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MM91/0425

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EXAMINER

GARCIA, J

ART UNIT

PAPER NUMBER

2823

DATE MAILED:

04/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/251,183

Applicant(s)

Lin

Examiner

Joannie Adelle Garcia

Group Art Unit

2823

☒ Responsive to communication(s) filed on 1/27/00☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-28 and 49-79 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-28 and 49-79 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on 1/27/00 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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The amendments 5-13, on page 24 of the amendment filed 1-26-00, could not be performed because the terms do not appear in the indicated locations.

The disclosure is objected to because of the following informalities: On page 16, line 10, "metalization" should be replaced by --metallization--. On page 23, line 5, "130" should be replaced by --131--. On page 23, line 6, "131" should be replaced by --130--. On page 23, line 12, "for", second occurrence, should be replaced by --of--. On page 23, line 3, "121" should be replaced by --120--.

Appropriate correction is required.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 36 on page 16, line 3. Correction is required.

Claims 3-10, and 50-55, are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims merely labels the top metallization system, and the overlaying interconnecting metallization structure, and therefore, do not further limits the processes of claims 1 and 49, respectively.

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Applicant argues that in claims 3-8 and 50-55, the subject matter that is further specified is the specific functionality, such as power planes, signal lines and the like, of the top metallization system. However, metallization systems specifically functions as power planes, signal lines, and the like.

Applicant argues that the subject matter that is further specified in claim 9, is the functional characteristics of the overlying interconnecting metallization structure whereby it can be extended to include contact points. However, in contact metallization structures contact points are necessarily included to fulfill the purpose of the structure which is to connect.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-28, and 49-79 are rejected under 35 U.S.C. as being unpatentable over Bandyopadhyay et al, in combination with Yamada'778, Yamada'020, Wolf and Cronin.

The rejection is maintained as stated in the Office Action mailed 10-20-99, and as follows.

Applicant argues that Bandyopadhyay et al does not disclose using nitride as the passivation layer. However, the claims are not so limited.

Applicant argues that Bandyopadhyay et al does not disclose the use of PECVD nitride-PECVD oxide as the passivation layer. However, Bandyopadhyay et al is relied upon for that purpose.

Applicant argues that Bandyopadhyay et al teaches steps additional to those recited.

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However, the claims are open to such steps through the use of the open "comprising" language.

Applicant argues that Bandyopadhyay et al does not provide for a thick layer of polymer or of benzocyclobutene that is used as an insulating layer in the upper level of the metal interconnect systems of the invention, which is used for planarization and for the reduction of parasitic capacitances. However, Bandyopadhyay et al is relied upon for that purpose.

Applicant remaining arguments are addressed in the statement of the rejection under 35 U.S.C. 103 in the paper mailed 10-20-99.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956. **See MPEP 203.08.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner J. Garcia whose telephone number is (703) 306-5733. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax number for this group is (703)308-7722(and 7724 and 7382). MPEP 502.01 contains instructions regarding procedures used in submitting responses by facsimile transmission.


JAG

April 24, 2000


George Fourson
Primary Examiner
Art Unit 2823